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SHERRILL LAW OFFICES 4756 BANNING AVE SUITE 212 WHITE BEAR LAKE, MN 55110-3205			EXAMINER JIMENEZ, MARC QUEMUEL	
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**MAILED**  
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/919,534  
Filing Date: July 31, 2001  
Appellant(s): WILLIAMS, MAKOLLE

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Michael S. Sherrill  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 5/7/2004.

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**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows:

1. Whether claims 1-28 are obvious over Ampian (United States Patent No. 5,207,755) in view of Cline (United States Patent No. 365,329) under 35 U.S.C. 103(a).

2. Whether claims 1-28 are obvious over Cayo (United States Patent No. 3,408,676) in view of Cline (United States Patent No. 365,329) under 35 U.S.C. 103(a).

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**(7) Grouping of Claims**

The rejection of claims 1-11 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

The rejection of claims 12-28 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

It is noted that on page 4, lines 4, 8, 15, and 19, appellant states that "Claims 1-11 stand or fall separately from claims 17-28". It is understood that Claims 1-11 stand or fall separately from claims 12-28 rather than claims 17-28. Claim 12 is the independent claim from which claims 17-28 depend upon. This appears to have been a typographical error in the appeal brief.

**(8) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

3,408,676	CAYO	11-1968
5,207,755	AMPIAN	5-1993
365,329	CLINE	6-1887

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

**Claims 1-28** stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ampian (5,207,755) in view of Cline (365,329).

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Regarding claims 1 and 12, Ampian teaches a paint roller comprising: a handle **12** having a first end and a second end, a shaft **14** having a first end and a second end, a functional element **22** secured to the second end of the shaft **14**, a flexure joint **10** interposed between and connecting the second end of the handle **12** and the first end of the shaft **14**, whereby the shaft is repositionable relative to the handle between a first locked position and a second locked position.

Ampian teaches the invention cited with the exception of having a spherical member (or attachment means as recited in claim 12), a receiving member configured and arranged to maintain and selectively engage the spherical member, and a connector in communication with the receiving member for releasably locking the spherical member in position as between a first locked position and a second locked position relative to the receiving member.

Cline teaches a handle **H** having a first end and a second end, a shaft **I** having a first end and a second end, a functional element (attached to threads) secured to the second end of the shaft **I**, a flexural joint **D** interposed between and connecting the second end of the handle **H** and the first end of the shaft **I**, which includes a spherical member (or attachment means) **F**, a receiving member **E** configured to maintain and selectively engage the spherical member **F**, and a connector **G** in communication with the receiving member **E** for releasably locking the spherical member **F** in position as between a first locked position and a second locked position relative to the receiving member **E**.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Ampian with a spherical member (or attachment means), a receiving member configured and arranged to maintain and selectively engage the spherical member, and a connector in communication with the receiving member for releasably locking

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the spherical member in position as between a first locked position and a second locked position relative to the receiving member, in light of the teachings of Cline, in order to provide better incremental adjustment of the shaft relative to the handle.

Regarding claims 2 and 13, Ampian teaches that the tube receiving frame **22** is rotatably secured to the second end of the shaft **14**.

Regarding claims 3-11 and 14-28, Cline teaches the particulars of the flexural joint (or attachment means) including: that the spherical member **F** is connected to the first end of the shaft **I** and the receiving member **E** is connected to the second end of the handle **H** as applied to claim 3, the spherical member **F** is connected to the second end of the handle **H** via **C** and the receiving member **E** is connected to the first end of the shaft **I** via **F** and **J** as applied to claim 4, the connector **G** is hand operable for locking and releasing the spherical member **F** as applied to claims 5, 17-20, 22, 24, 26, and 28, the spherical member **F** has a radius, the receiving member **E** has first and second arms **B,C**, the first arm **B** has an inner surface facing the second arm **C** and defines a depression having a circular periphery on the inner surface, the depression has a radius which is smaller than the radius of the spherical member **F**, and the spherical member **F** is sandwiched between the first and second arms **B,C** and centered within the depression through the first flange as applied to claims 6 and 7, the depression in the first arm **B** is an aperture (for **G**) extending completely through the first arm **B** as applied to claims 8 and 9, the connector **G** has a proximal end and a distal end with the distal end, with the distal end slidingly extending through a bore in one arm **B** and threadably engaging the other arm **C** so as to prevent passage of the connector **G**, completely through the bore, whereby tightening of the connector pulls the arms together to lock as applied to claims 10 and 11, the shaft **I** can be angularly repositioned

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relative to the axis of the handle **H** through at least 60 degrees in one direction or at least 120 degrees in at least one direction as applied to claims 14 and 15, the attachment means is hand operable by turning the connector **G** as applied to claim 16, and the shaft **I** is rotatable 360 degrees relative to the receiving member **E** as applied to claims 21, 23, 25, and 27.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Ampian with the particulars of the flexural joint (or attachment means) including: that the spherical member is connected to the first end of the shaft and the receiving member is connected to the second end of the handle as applied to claim 3, the spherical member is connected to the second end of the handle and the receiving member is connected to the first end of the shaft as applied to claim 4, the connector is hand operable for locking and releasing the spherical member as applied to claims 5, 17-20, 22, 24, 26, and 28, the spherical member has a radius, the receiving member has first and second arms, the first arm has an inner surface facing the second arm and defines a depression having a circular periphery on the inner surface, the depression has a radius which is smaller than the radius of the spherical member, and the spherical member is sandwiched between the first and second arms and centered within the depression through the first flange as applied to claims 6 and 7, the depression in the first arm is an aperture extending completely through the first arm as applied to claims 8 and 9, the connector has a proximal end and a distal end with the distal end, with the distal end slidingly extending through a bore in one arm and threadably engaging the other arm so as to prevent passage of the connector, completely through the bore, whereby tightening of the connector pulls the arms together to lock as applied to claims 10 and 11, the shaft can be angularly repositioned relative to the axis of the handle through at least 60 degrees in one

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direction or at least 120 degrees in at least one direction as applied to claims 14 and 15, the attachment means is hand operable by turning the connector as applied to claim 16, and the shaft is rotatable 360 degrees relative to the receiving member as applied to claims 21, 23, 25, and 27, in light of the teachings of Cline, in order to provide better incremental adjustment of the shaft relative to the handle.

**Claims 1-28** stand rejected under 35 U.S.C. 103(a) as being unpatentable over Cayo (3,408,676) in view of Cline (365,329).

Regarding claims 1 and 12, Cayo teaches a handle **7**, shaft **3**, functional element **1**, and flexure joint **5**.

Cayo teaches the invention cited with the exception of having a spherical member (or attachment means as recited in claim 12), a receiving member configured and arranged to maintain and selectively engage the spherical member, and a connector in communication with the receiving member for releasably locking the spherical member in position as between a first locked position and a second locked position relative to the receiving member.

Cline teaches a handle **H** having a first end and a second end, a shaft **I** having a first end and a second end, a functional element (attached to threads) secured to the second end of the shaft **I**, a flexural joint **D** interposed between and connecting the second end of the handle **H** and the first end of the shaft **I**, which includes a spherical member (or attachment means) **F**, a receiving member **E** configured to maintain and selectively engage the spherical member **F**, and a connector **G** in communication with the receiving member **E** for releasably locking the spherical member **F** in position as between a first locked position and a second locked position relative to the receiving member **E**.



It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Cayo with a spherical member (or attachment means), a receiving member configured and arranged to maintain and selectively engage the spherical member, and a connector in communication with the receiving member for releasably locking the spherical member in position as between a first locked position and a second locked position relative to the receiving member, in light of the teachings of Cline, in order to provide better incremental adjustment of the shaft relative to the handle.

Regarding claims 2 and 13, Cayo teaches that the tube receiving frame (the frame which holds 1) is rotatably secured to the second end of the shaft 3.

Regarding claims 3-11 and 14-28, Cline teaches the particulars of the flexural joint (or attachment means) including: that the spherical member **F** is connected to the first end of the shaft **I** and the receiving member **E** is connected to the second end of the handle **H** as applied to claim 3, the spherical member **F** is connected to the second end of the handle **H** via **C** and the receiving member **E** is connected to the first end of the shaft **I** via **F** and **J** as applied to claim 4, the connector **G** is hand operable for locking and releasing the spherical member **F** as applied to claims 5, 17-20, 22, 24, 26, and 28, the spherical member **F** has a radius, the receiving member **E** has first and second arms **B,C**, the first arm **B** has an inner surface facing the second arm **C** and defines a depression having a circular periphery on the inner surface, the depression has a radius which is smaller than the radius of the spherical member **F**, and the spherical member **F** is sandwiched between the first and second arms **B,C** and centered within the depression through the first flange as applied to claims 6 and 7, the depression in the first arm **B** is an aperture (for **G**) extending completely through the first arm **B** as applied to claims 8 and 9, the connector **G**

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has a proximal end and a distal end with the distal end, with the distal end slidably extending through a bore in one arm **B** and threadably engaging the other arm **C** so as to prevent passage of the connector **G**, completely through the bore, whereby tightening of the connector pulls the arms together to lock as applied to claims 10 and 11, the shaft **I** can be angularly repositioned relative to the axis of the handle **H** through at least 60 degrees in one direction or at least 120 degrees in at least one direction as applied to claims 14 and 15, the attachment means is hand operable by turning the connector **G** as applied to claim 16, and the shaft **I** is rotatable 360 degrees relative to the receiving member **E** as applied to claims 21, 23, 25, and 27.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Cayo with the particulars of the flexural joint (or attachment means) including: that the spherical member is connected to the first end of the shaft and the receiving member is connected to the second end of the handle as applied to claim 3, the spherical member is connected to the second end of the handle and the receiving member is connected to the first end of the shaft as applied to claim 4, the connector is hand operable for locking and releasing the spherical member as applied to claims 5, 17-20, 22, 24, 26, and 28, the spherical member has a radius, the receiving member has first and second arms, the first arm has an inner surface facing the second arm and defines a depression having a circular periphery on the inner surface, the depression has a radius which is smaller than the radius of the spherical member, and the spherical member is sandwiched between the first and second arms and centered within the depression through the first flange as applied to claims 6 and 7, the depression in the first arm is an aperture extending completely through the first arm as applied to claims 8 and 9, the connector has a proximal end and a distal end with the distal end, with the

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distal end slidably extending through a bore in one arm and threadably engaging the other arm so as to prevent passage of the connector, completely through the bore, whereby tightening of the connector pulls the arms together to lock as applied to claims 10 and 11, the shaft can be angularly repositioned relative to the axis of the handle through at least 60 degrees in one direction or at least 120 degrees in at least one direction as applied to claims 14 and 15, the attachment means is hand operable by turning the connector as applied to claim 16, and the shaft is rotatable 360 degrees relative to the receiving member as applied to claims 21, 23, 25, and 27, in light of the teachings of Cline, in order to provide better incremental adjustment of the shaft relative to the handle.

**(11) Response to Argument**

Appellant argues that in Cline, the movement of the shaft **I** restricts rotation of the ball **F** about only a single axis that is a transverse axis orthogonal to the gap between the parts **B** and **C** of the split shank **A** and that Cline does not disclose whether the attachment can be locked so as to prevent movement about the single axis. It is noted, however, that the attachment **D** of Cline is a universal joint that has an infinite number of degrees of freedom. The shaft **I** can be rotated a full 360 degrees about the axis of the handle **H**, the shaft **I** can have angular pivotal motion between parts **B** and **C** (into and out of the page looking at the figure), and the shaft **I** can be rotated clockwise and counterclockwise looking at the figure because of the gap formed between **J** and **D** and between **J** and **E**. It is clear from the figure that the attachment **D** can be locked by rotation of the connection element **G**. As the connector **G** is rotated, it forces the shanks **B** and **C** to squeeze the spherical member **F** and lock the spherical member **F** in place. Compare the figure of Cline to fig. 1 of appellant's figure showing the respective spherical member attachments.

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In response to appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Appellant argues that there is no motivation to use the spherical attachment of Cline in the paint rollers of either Ampian or Cayo. It is noted, however, that Cline provides a spherical universal joint that enables the user to obtain better incremental adjustment. Furthermore, the attachment of Cline provides a simpler, less expensive joint with multiple degrees of freedom. It is noted that a roller is a form of brush in the painting art. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have modified the attachments of either one of Ampian or Cayo with the spherical attachment taught by Cline.

For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,

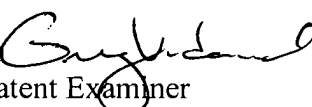


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